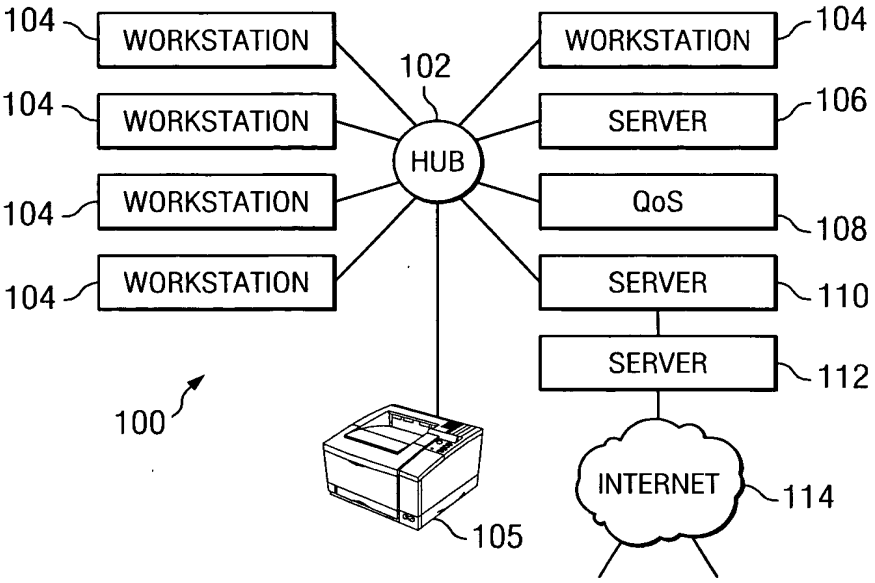
OIPE
MAR 0 4 2004
PATENT & TRADEMARK OFFICE

FIG. 1



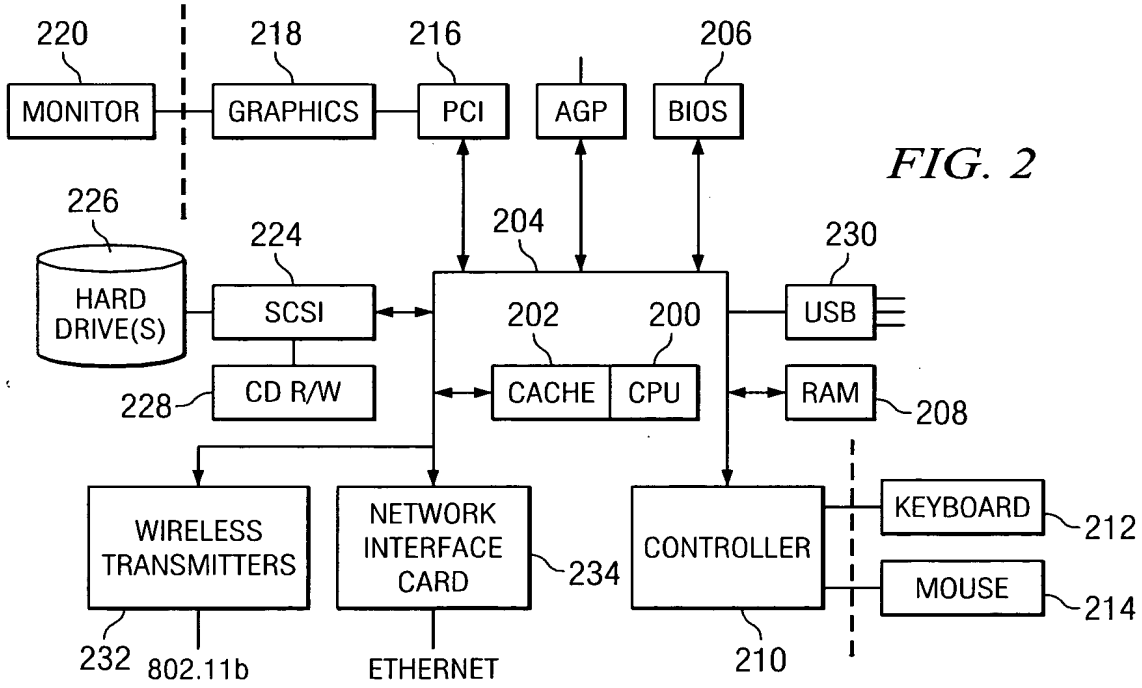


FIG. 2

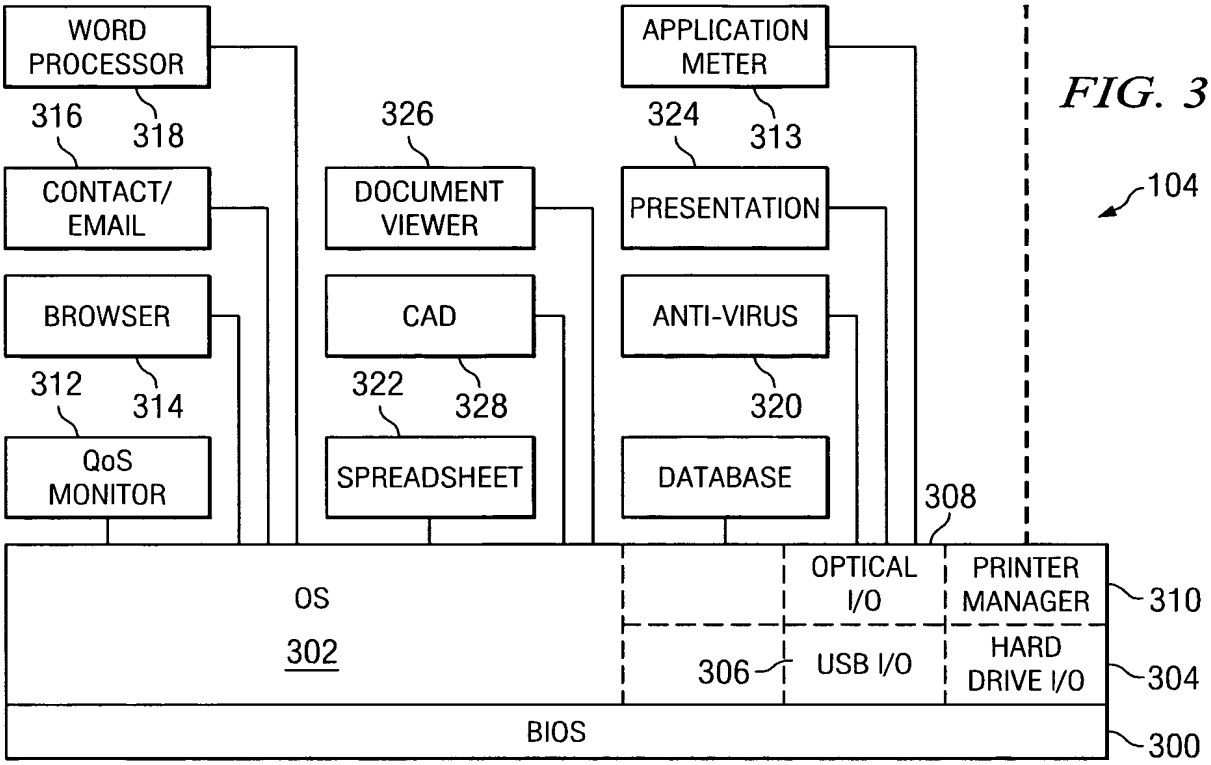

WORD PROCESSOR
316
318
CONTACT/ EMAIL
BROWSER
312
314
QoS MONITOR
326
DOCUMENT VIEWER
CAD
322
328
SPREADSHEET
APPLICATION METER
324
313
PRESENTATION
ANTI-VIRUS
320
DATABASE
308
OS
302
OPTICAL I/O
PRINTER MANAGER
310
306
USB I/O
HARD DRIVE I/O
304
BIOS
300
104

FIG. 3

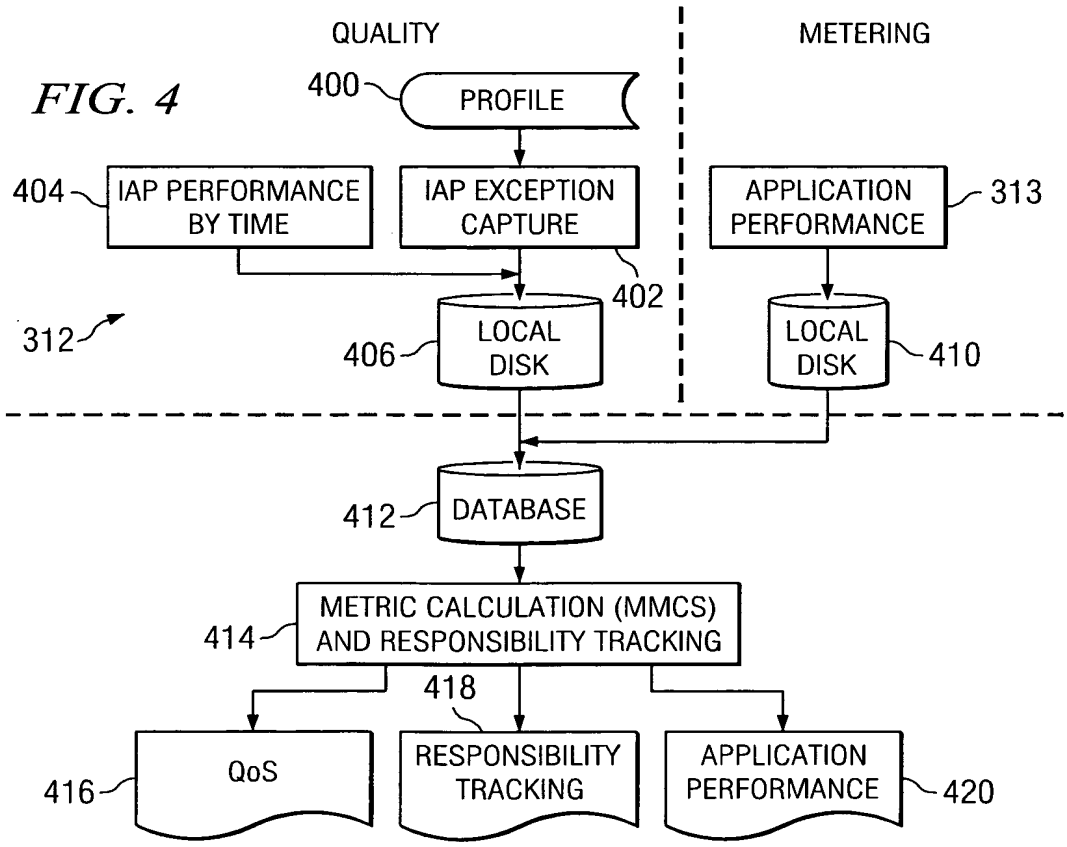

QUALITY
METERING
400
PROFILE
404
IAP PERFORMANCE BY TIME
IAP EXCEPTION CAPTURE
402
APPLICATION PERFORMANCE
313
312
406
LOCAL DISK
LOCAL DISK
410
412
DATABASE
414
METRIC CALCULATION (MMCS) AND RESPONSIBILITY TRACKING
418
416
QoS
RESPONSIBILITY TRACKING
APPLICATION PERFORMANCE
420

FIG. 4

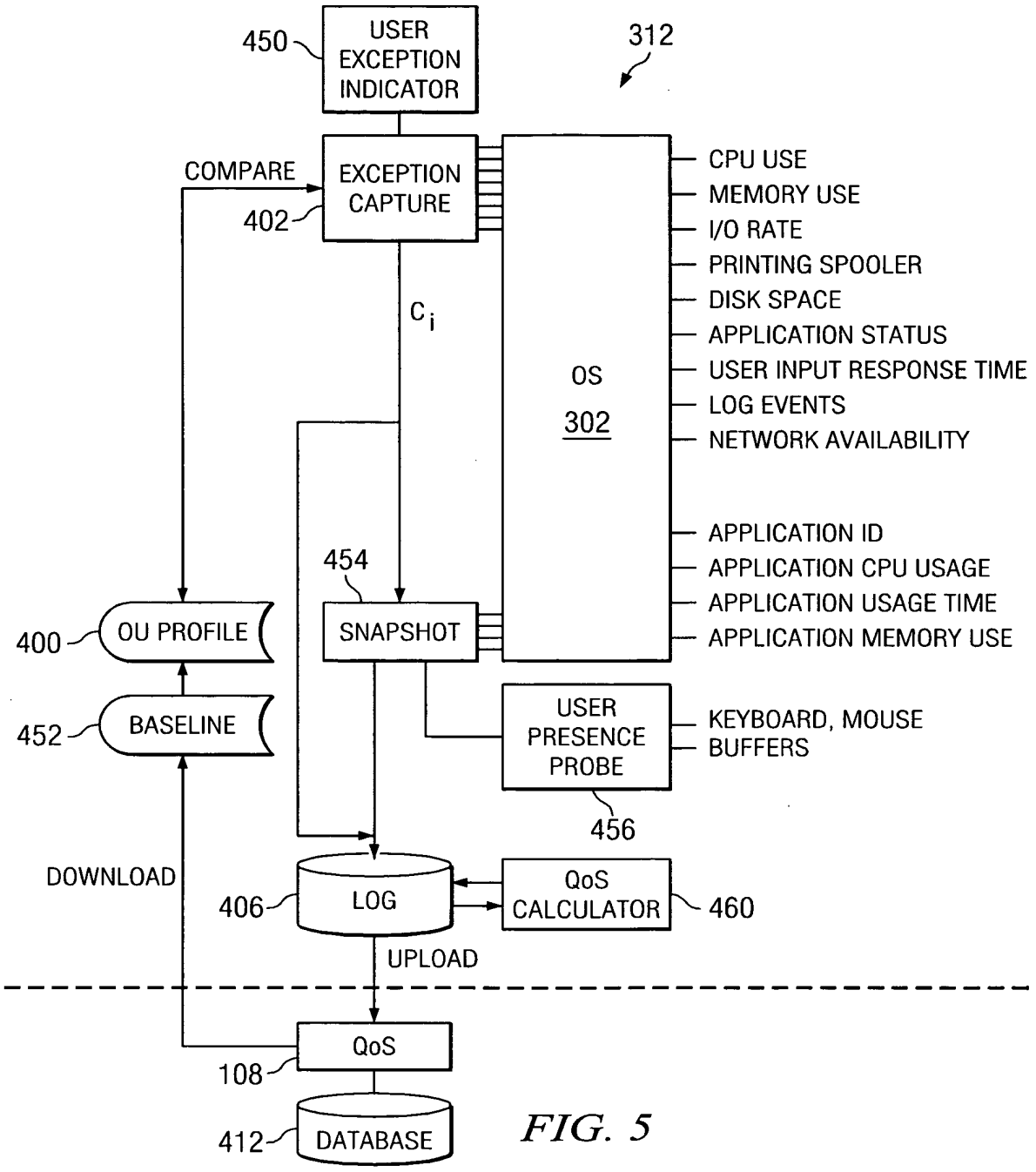

450
USER EXCEPTION INDICATOR
312
COMPARE
EXCEPTION CAPTURE
402
C_i
OS
302
CPU USE
MEMORY USE
I/O RATE
PRINTING SPOOLER
DISK SPACE
APPLICATION STATUS
USER INPUT RESPONSE TIME
LOG EVENTS
NETWORK AVAILABILITY
APPLICATION ID
APPLICATION CPU USAGE
APPLICATION USAGE TIME
APPLICATION MEMORY USE
454
400
OU PROFILE
SNAPSHOT
452
BASELINE
USER PRESENCE PROBE
KEYBOARD, MOUSE BUFFERS
456
DOWNLOAD
406
LOG
QoS CALCULATOR
460
UPLOAD
QoS
108
412
DATABASE

FIG. 5

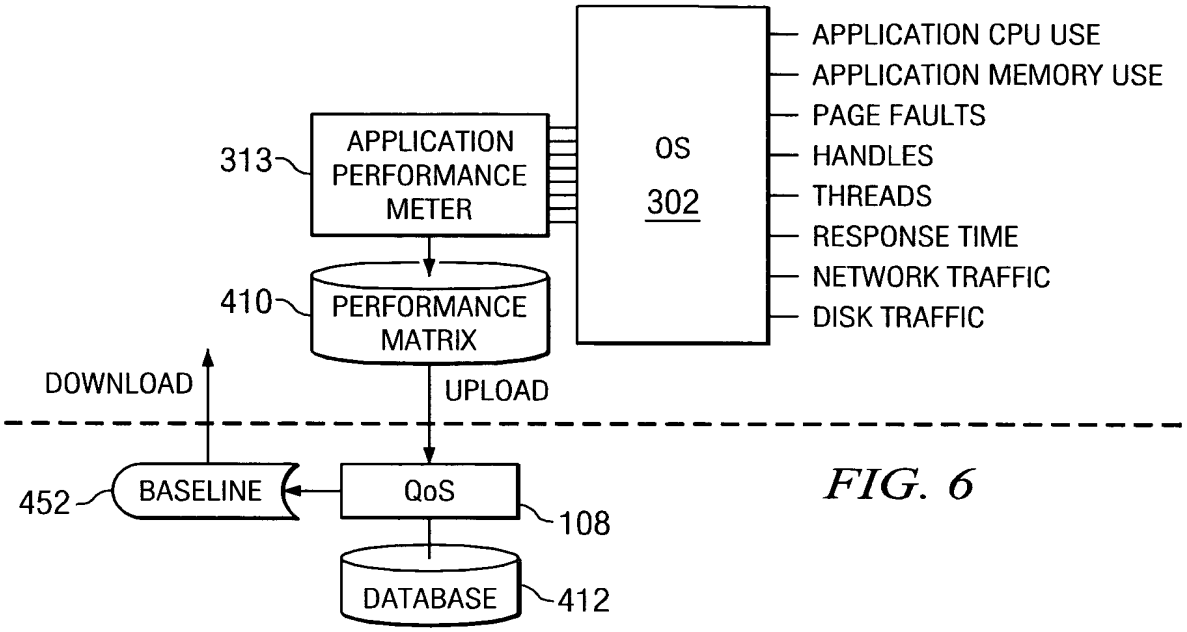


FIG. 6

FIG. 7

FACTOR	USER TYPE 1	USER TYPE 2	USER TYPE 3
EVENT TYPE			
-CPU	1.0	1.0	0.5
-MEMORY	1.0	1.0	0.5
-NETWORK	0.5	1.5	1.0
-I/O	1.0	1.0	1.0
-RESPONSE TIME	1.2	1.2	2.0
USER			
-PRESENT	1.0	0.5	1.0
-ABSENT	0.5	0.5	0.5
TIME OF DAY			
-DURING BUSINESS HOURS	1.0	1.0	1.0
-AFTER BUSINESS HOURS	0.2	0.2	0.5
-PRIME TIME	1.5	2.0	2.0
DAY			
-WORK DAY	1.0	1.0	1.0
-HOLIDAY	0.2	0.2	1.0
-WEEKEND	0.5	1.0	1.0
APPLICATION TYPE			
-SYSTEM	1.0	1.0	1.0
-SYSTEM CRITICAL	2.0	1.0	1.0
-USER	1.0	1.0	1.0
-USER CRITICAL	1.5	3.0	3.0

FACTOR	YELLOW	ORANGE	RED
CPU	PRIVILEGE STATE>20% >30 SEC OR USER STATE>80%>1 MIN	PRIVILEGE STATE>30% >2 MIN OR USER STATE>90%>5 MIN	PRIVILEGE OR USER STATE 100%>1 MIN
MEMORY	80%>1 MIN	80%>2 MIN	100%>30 SEC
I/O	30%>1 MIN	70%>2 MIN	90%>30 SEC
PRINTING	BLOCKED>2 MIN	BLOCKED>5 MIN	SPOOLER UNAVAILABLE
DISK SPACE	<30% FREE	<20% FREE	<10% FREE
APPLICATION CRASH	N/A	APPLICATION HUNG>2 MIN	APPLICATION HUNG >5 MIN OR CRASHED
SYSTEM CRASH	A SERVICE THAT SHOULD BE ON IS OFF	A SERVICE HUNG>2 MIN	A SERVICE HUNG>5 MIN OR SERVICE CRASHED
RESPONSE TIME	>5 SEC	>15 SEC	>30 SEC
LOG EVENTS	PREDEFINED MESSAGE NUMBERS	WARNING MESSAGE OR PREDEFINED MESSAGE NUMBERS	ERROR MESSAGE OR PREDEFINED MESSAGE NUMBERS
NETWORK	THROUGHPUT REDUCED 50%>5 MIN	THROUGHPUT REDUCED 80%>5 MIN	NETWORK UNAVAILABLE
USER INPUT	USER SELECTS YELLOW	USER SELECTS ORANGE	USER SELECTS RED

FIG. 8

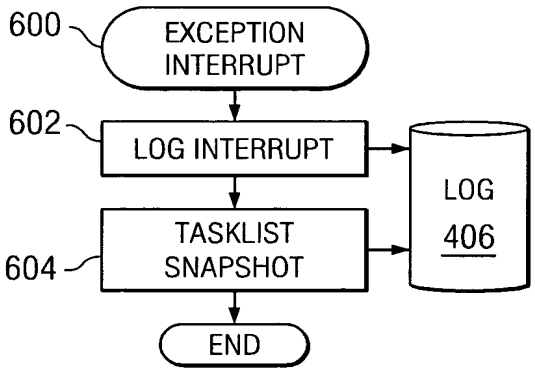


FIG. 9

FIG. 10

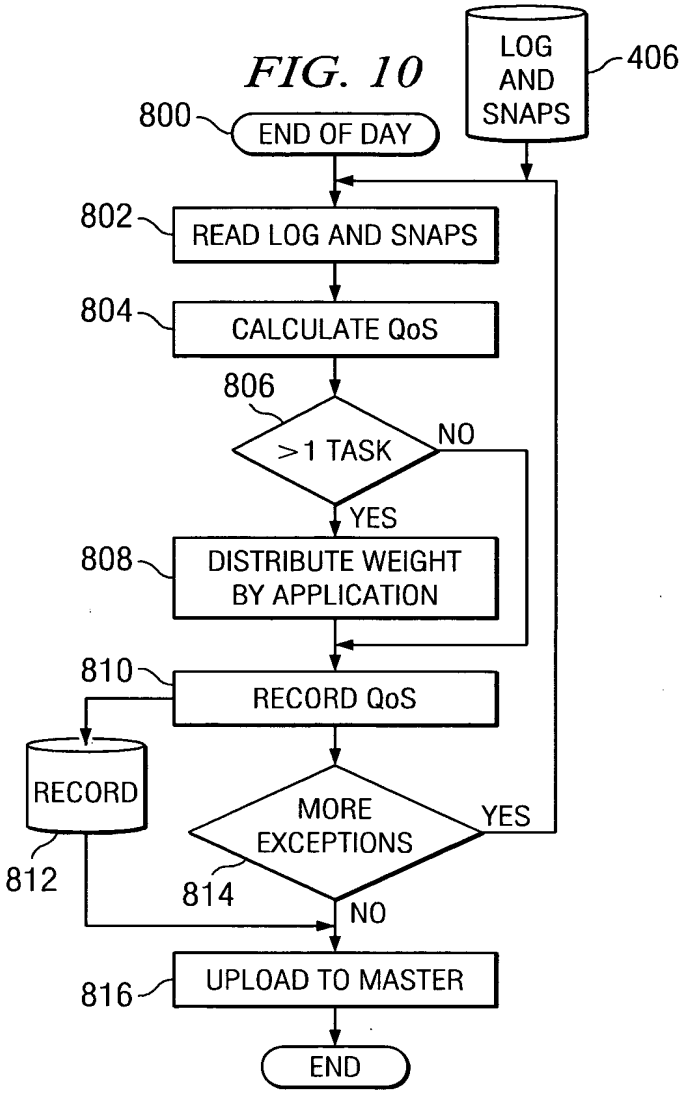
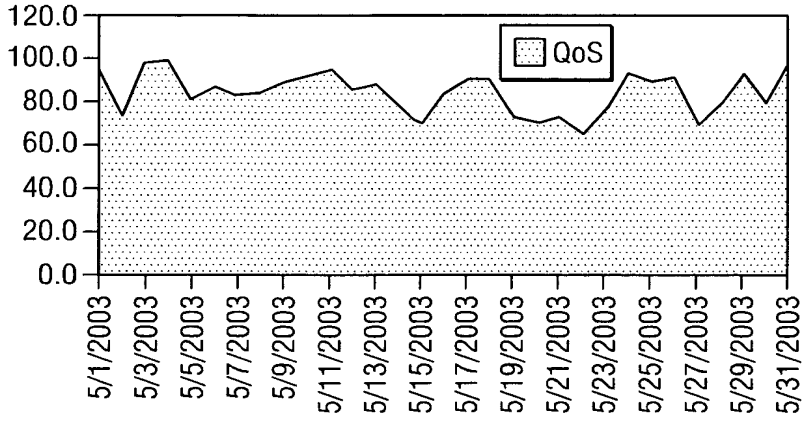

LOG AND SNAPS
406
800
END OF DAY
802
READ LOG AND SNAPS
804
CALCULATE QoS
806
>1 TASK
NO
YES
808
DISTRIBUTE WEIGHT BY APPLICATION
810
RECORD QoS
RECORD
812
MORE EXCEPTIONS
YES
814
NO
816
UPLOAD TO MASTER
END

FIG. 11


120.0
100.0
80.0
60.0
40.0
20.0
0.0
QoS
5/1/2003
5/3/2003
5/5/2003
5/7/2003
5/9/2003
5/11/2003
5/13/2003
5/15/2003
5/17/2003
5/19/2003
5/21/2003
5/23/2003
5/25/2003
5/27/2003
5/29/2003
5/31/2003

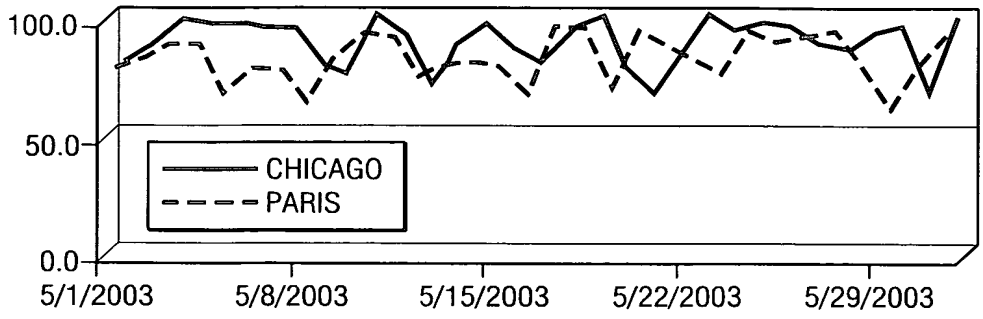


FIG. 12

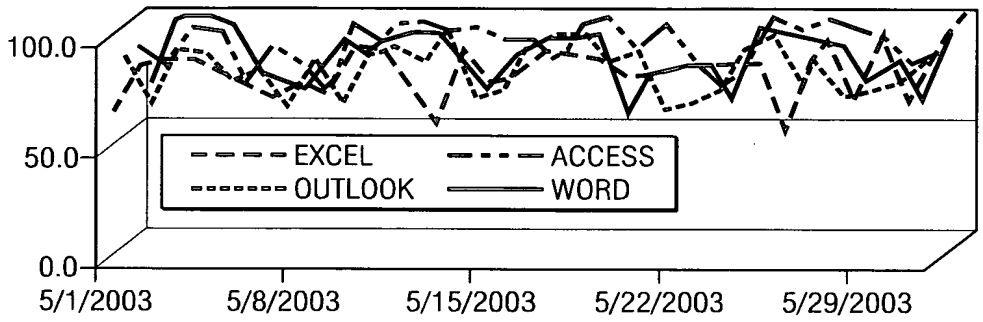
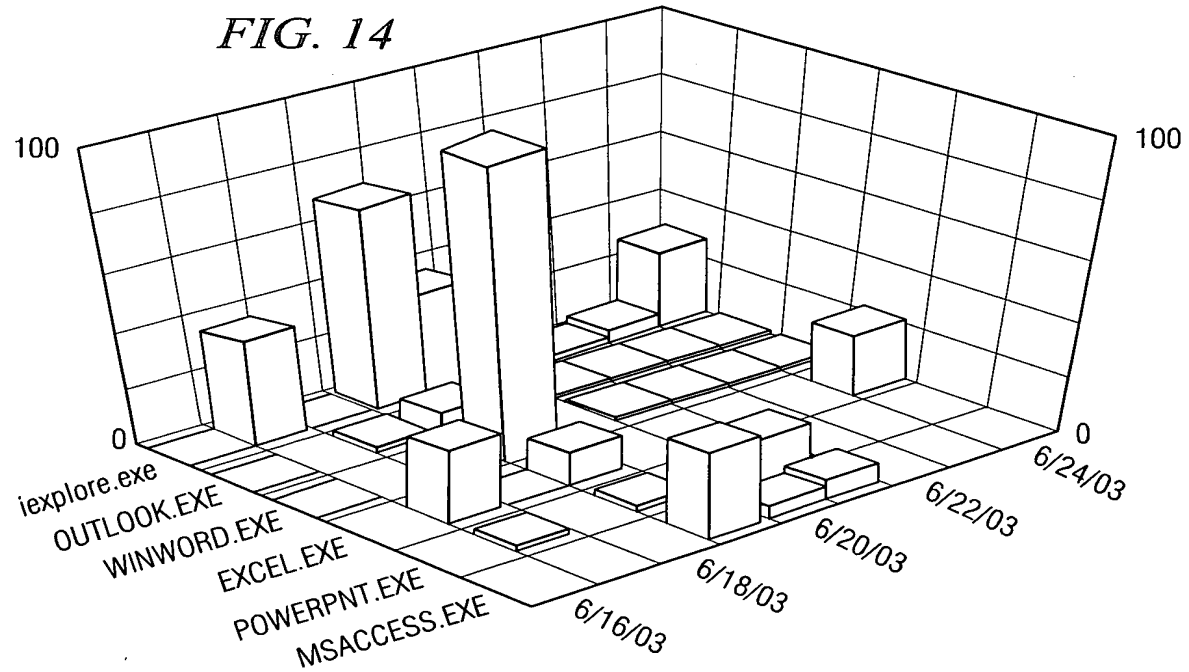


FIG. 13

FIG. 14



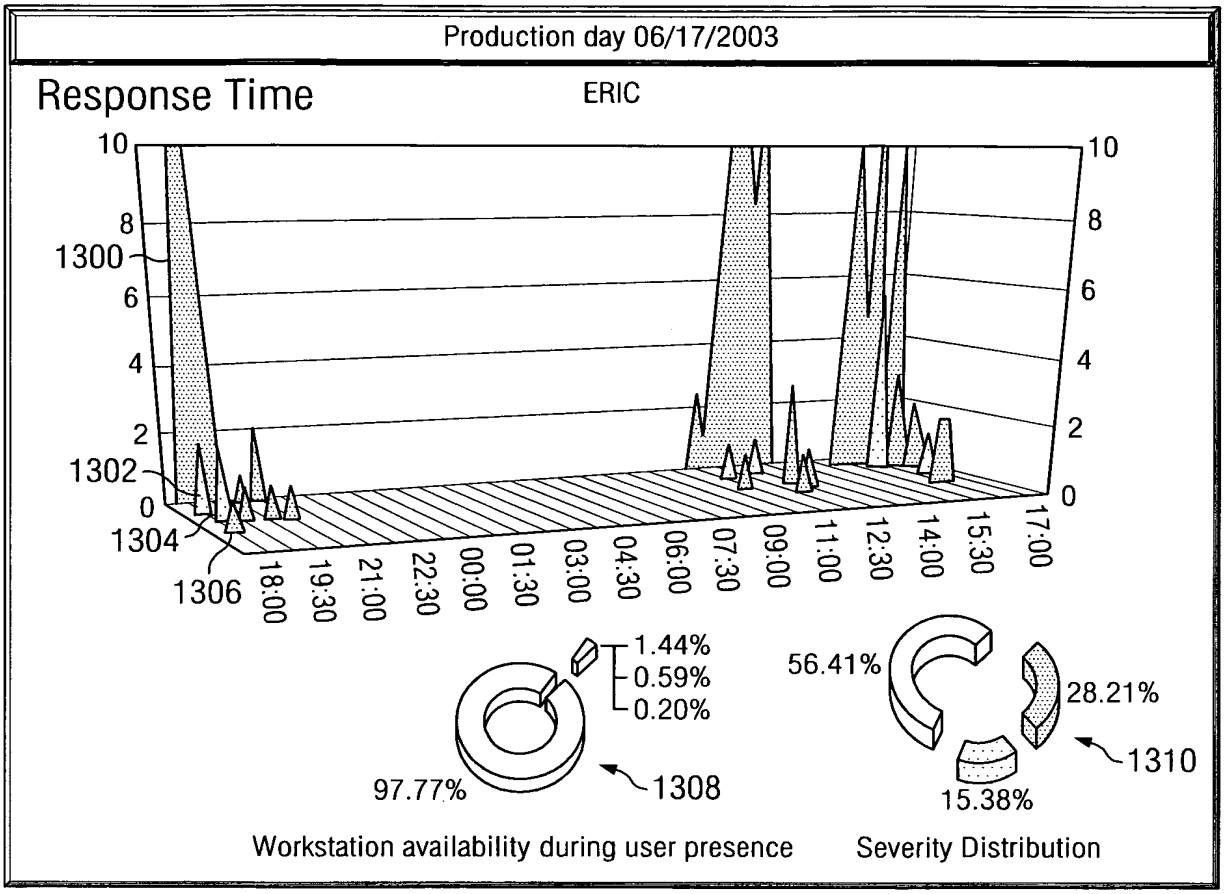

Production day 06/17/2003
Response Time
ERIC
10
8
1300
6
4
2
1302
0
1304
1306
18:00
19:30
21:00
22:30
00:00
01:30
03:00
04:30
06:00
07:30
09:00
11:00
12:30
14:00
15:30
17:00
1.44%
0.59%
0.20%
97.77%
1308
56.41%
28.21%
1310
15.38%
Workstation availability during user presence
Severity Distribution

FIG. 15

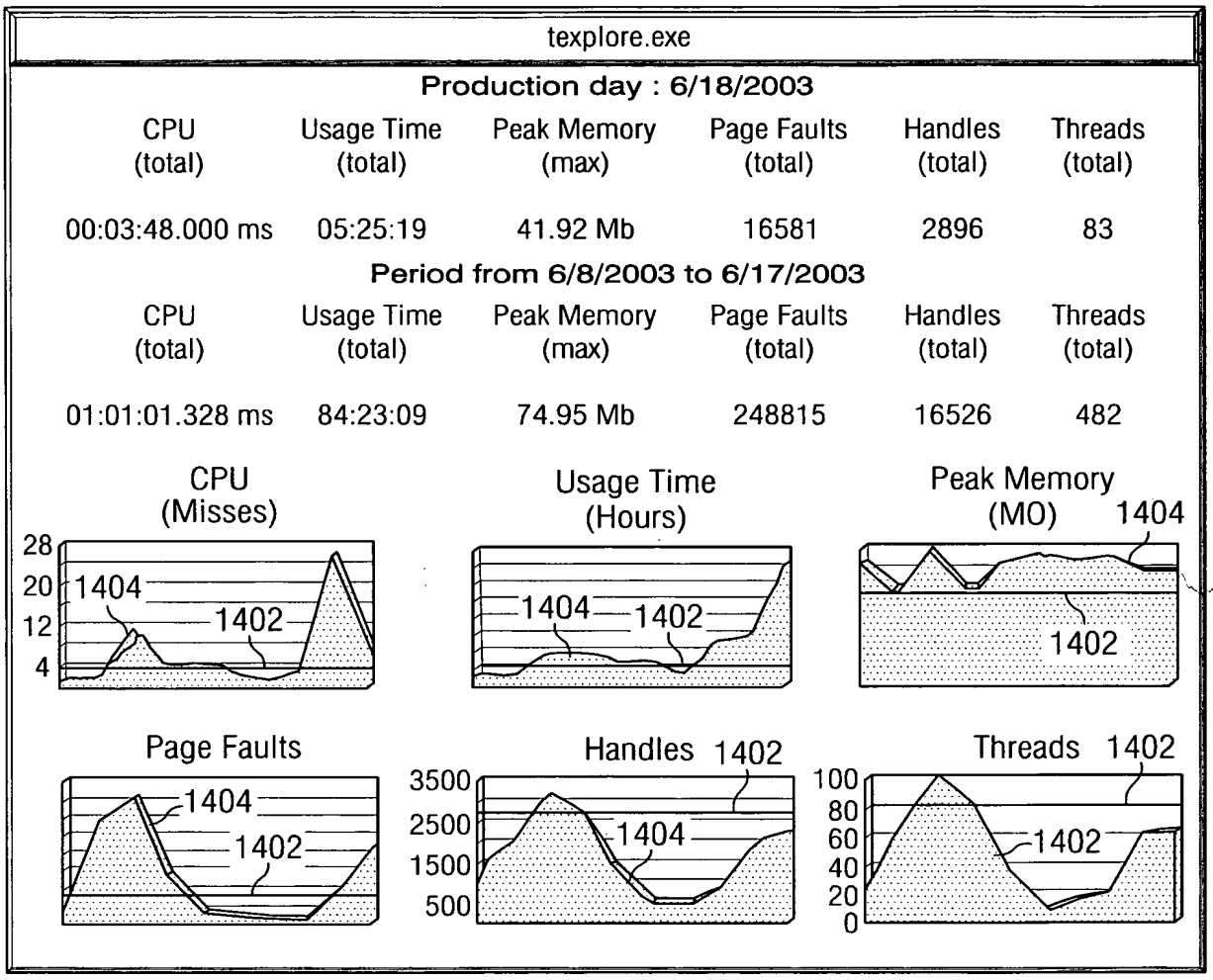

texplore.exe
Production day : 6/18/2003
CPU (total)
Usage Time (total)
Peak Memory (max)
Page Faults (total)
Handles (total)
Threads (total)
00:03:48.000 ms
05:25:19
41.92 Mb
16581
2896
83
Period from 6/8/2003 to 6/17/2003
CPU (total)
Usage Time (total)
Peak Memory (max)
Page Faults (total)
Handles (total)
Threads (total)
01:01:01.328 ms
84:23:09
74.95 Mb
248815
16526
482
CPU (Misses)
28
20
12
4
1404
1402
Usage Time (Hours)
1404
1402
Peak Memory (MO)
1404
1402
Page Faults
1404
1402
Handles
1402
3500
2500
1500
500
1404
Threads
1402
100
80
60
40
20
0
1402

FIG. 16

FIG. 17

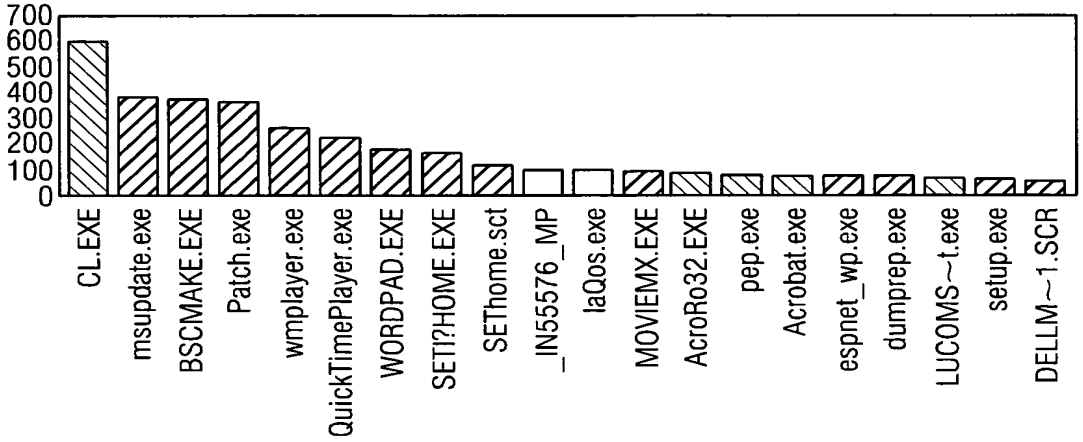
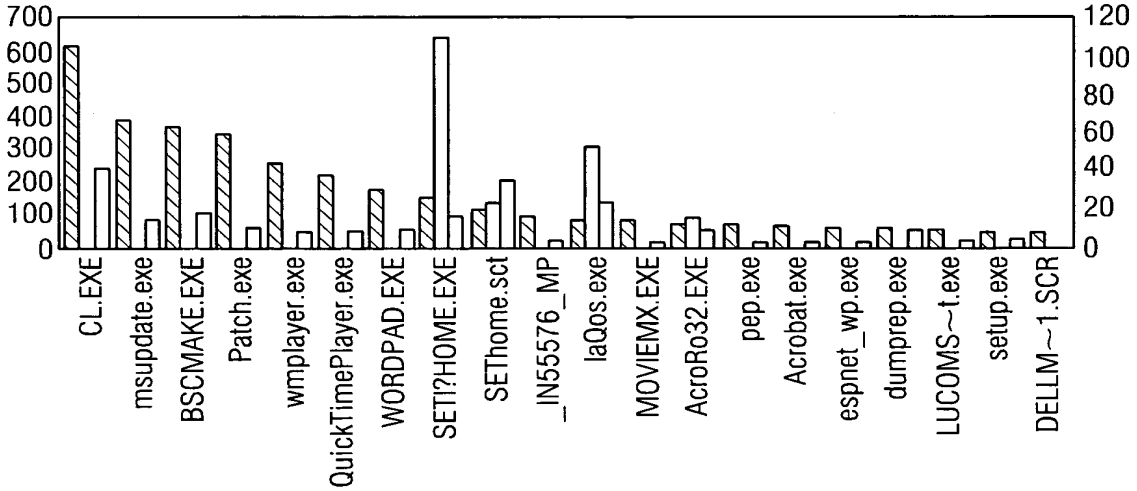

700
600
500
400
300
200
100
0
CL.EXE
msupdate.exe
BSCMAKE.EXE
Patch.exe
wmplayer.exe
QuickTimePlayer.exe
WORDPAD.EXE
SETI?HOME.EXE
SEThome.sct
_IN55576_MP
laQos.exe
MOVIEMX.EXE
AcroRo32.EXE
pep.exe
Acrobat.exe
espnet_wp.exe
dumprep.exe
LUCOMS~t.exe
setup.exe
DELLM~1.SCR

FIG. 18


700
600
500
400
300
200
100
0
120
100
80
60
40
20
0
CL.EXE
msupdate.exe
BSCMAKE.EXE
Patch.exe
wmplayer.exe
QuickTimePlayer.exe
WORDPAD.EXE
SETI?HOME.EXE
SEThome.sct
_IN55576_MP
laQos.exe
MOVIEMX.EXE
AcroRo32.EXE
pep.exe
Acrobat.exe
espnet_wp.exe
dumprep.exe
LUCOMS~t.exe
setup.exe
DELLM~1.SCR